OFFICE HOURS 2019-04-09

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1. Prerequisites

- General Topology
- Homological Algebra
- Homotopy Theory
- Stable Homotopy Theory
- Cobordism and Complex Oriented Cohomology

Date: 2019-04-09.
url: `https://mathoverflow.net/questions/27282/is-bredons-topology-a-sufficient-prelude-to-bredons-sheaf-theory`.

I intend to try working through Bredon's seminal sheaf theory text prior to graduating (I am currently a second year undergraduate), but it is at a level which is far beyond my own (friends of mine who study algebraic topology have gone until their second and third years as graduate students before touching it). However, I am interested in algebraic geometry (though the material treated in Bredon's text is certainly of relative interest to me) and find Bredon's "Topology and Geometry" to be a superb treatment of the algebro-topological tools which may have some utility in my future studies (Bredon takes a more geometric approach). . . .

asked Jun 6 '10 at 22:52

> To be frank, my reaction to this is "what's the rush?" I am perhaps blinded by my own personal limitations, but I believe that the undergraduate years are best spent doing as much mathematics as possible using only your "bare hands" and learning as many concrete examples as possible, whether in topology or algebraic geometry. All the fancy abstract machinery is much more meaningful, if you have first tried to do things without it. Also, I have seen too many precocious students try to answer relatively simple questions using too much machinery. – Deane Yang Jun 6 '10 at 23:43
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> Deane, I was going to write exactly the same thing. Learning something as dry as sheaf theory before encountering a real need for it (in alg. geom., several complex variables, etc.) is a very unwise idea (like learning homological algebra in the absence of applications). Retention will be negligible. Sheaf theory is a powerful body of techniques for solving certain kinds of problems, but this stuff is best understood only in the service of an application (e.g., cup products, deRham comparison isom, etc.). Anyway, Godement's sheaf theory book (in French) is better than Bredon's. :) – BCnrd Jun 7 '10 at 1:15
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> Alright, well I am not unsure as to my capacity to at least learn some geometry/topology; is the Bredon text mentioned above a good place to start learning these topics in a 'more advanced' light? I have the basic results of point-set topology and analytic geometry in my ken, so to speak. – lambdafunctor Jun 7 '10 at 1:56
>
> So learn more geometry and topology! There are plenty of books that aim to teach you complex differential or algebraic geometry, where just enough sheaf theory is introduced as needed. If you have not already learned everything in the context of Riemann surfaces, that's a really nice easy place to start. Also, if you have not read Bott-Tu (which really is a graduate text), I suggest studying that before Bredon.